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Our Ref.: Attorney Docket No. F-736

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Patent Application of: ) Attorney Docket No.: F-736  
Judith D Auslander, et al. ) Group Art Unit: 2876  
Serial No.: 10/692,569 ) Examiner: Nguyen, Kimberly D  
Filed: October 24, 2003 ) Date: June 6, 2007  
Confirmation No.: 9107

Title: FLUORESCENT HIDDEN INDICIUM

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
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**APPELLANTS' BRIEF ON APPEAL**

Sir:

This is an appeal pursuant to 35 U.S.C. § 134 and 37 C.F.R. §§ 1.191 et seq. from the decision of the Examiner, mailed August 21, 2006, finally rejecting claims 11-23 of the above-identified application. In support of the Notice of Appeal filed January 19, 2007, and pursuant to 37 C.F.R. § 41.37, Appellants present this Corrected Brief. This Corrected Brief on Appeal is submitted in response to the May 8, 2007 Notice of Non-compliant Appeal Brief. Accordingly, this Corrected Brief is timely filed. No fee is believed due. The Commissioner is hereby authorized to charge any additional fees that may be required or credit any overpayment to Deposit Account No. 16-1885.

**CERTIFICATE OF FACSIMILE**

I hereby certify that this correspondence is being transmitted via facsimile to the United States Patent and Trademark Office to (571) 273-8300 on June 6, 2007 (Date of Transmittal):

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**I. Real Party in Interest**

The real party in interest in this appeal is Pitney Bowes Inc., a Delaware corporation, the assignee of the entire right, title, and interest in this application.

**II. Related Appeals and Interferences**

There are no appeals or interferences known to Appellants, their legal representative, or the assignee that will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

**III. Status of Claims**

Claims 1-10 and 23-30 have been canceled.

Claims 11-23 are pending in this application. Claims 11-23 stand rejected.

Appellants hereby appeal the rejection of claims 11-23.

The claims on appeal are set forth in the Claims Appendix to this Brief.

**IV. Status of Amendments**

There are no amendments to the claims filed subsequently to the final rejection mailed August 21, 2006. Therefore, the claims as set forth in Appendix A to this brief are those as set forth before the final rejection.

**V. Summary of Claimed Subject Matter**

This summary and references to specific page and line numbers, figures and reference characters are not intended to supplant or limit the description of the claimed subject matter as provided in the claims as recited in Appendix A, as understood in light of the entire specification.

Appellants' invention is directed to a system and method for printing an indicium with hidden information printed within the indicium. The system, as set forth in independent claim 11, comprises a print head system (see 46 in Fig 7, paragraph 39) adapted to print at least two different inks onto the item. The print head system comprises a first supply of a first ink (see 50

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in Fig 7, paragraph 39) having a first color under normal daylight and a second supply of a second different ink (see 52 in Fig 7, paragraph 39), the second different ink is a fluorescent ink having a second color under a normal daylight which is substantially the same as the first color. The system further comprises a controller (see 48 in Fig 7, paragraph 40) for controlling application of the first and second inks by the print head system on an item. The controller is adapted to print the first and second inks in at least partially intermixed patterns such that the patterns of the first and second inks are substantially visually indiscernible within the indicium in normal daylight (see 20 in Fig 3 and 22 in Fig. 1, paragraphs 37 and 30-31), and the second pattern of the second ink is discernible from the first pattern when subjected to fluorescent-exciting radiation (see 24 and 26 in Fig 2, paragraphs 40 and 41; also see 28 and 30 in Figs 4 and 5, paragraphs 37 and 38).

The method in accordance with the present invention, as set forth in independent claim 19, comprises the steps of printing a first pattern on an item with a first ink that is non-fluorescent and has a first color under normal daylight (see 28 in Fig 4, paragraphs 37); and printing a second pattern on the item at the first pattern with a second different ink, that is a fluorescent ink having a substantially same color as the first ink under normal daylight (see 30 in Fig 5, paragraphs 37), such that the first and second patterns are substantially visually indiscernible within the indicium under normal daylight, and the second pattern is discernible from the first pattern when subjected to a fluorescent-exciting illumination source (see 24 and 26 in Fig 2, paragraphs 30-31 and 40-41; also see 28 and 30 in Figs 4 and 5, paragraphs 37-38).

**VI. Grounds of Rejection to be Reviewed on Appeal**

- A. Claims 11-12, 14, 16-17, 19-20 and 22-23 stand rejected under 35 USC 103(a) as being unpatentable over Wright et al. (US 4,864,618) ("Wright") in view of Bhatt, Bipin G. (EP 900830 A1) ("Bhatt").
- B. Claim 13 stands rejected under 35 USC 103 (a) as being unpatentable over Wright in view of Parkos (US 5,912,682) ("Parkos").
- C. Claims 15, 18 and 21 stand rejected under 35 USC 103(a) as being unpatentable over Wright in view of Soules et al. (US 5,067,713) ("Soules").

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**VII. Argument**

As Appellants discuss in detail below, the final rejection of claims 11-23 is devoid of any factual or legal premise that supports the position of unpatentability. It is respectfully submitted that the rejection does not even meet the threshold burden of presenting a prima facie case of unpatentability. For this reason alone, Appellants are entitled to grant of a patent. In re Oetiker, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992).

**A. Claims 11-12, 14, 16-17, 19-20 and 22-23 are patentable over Wright in view of Bhatt**

As set forth in M.P.E.P. § 2143 "[t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

Wright discloses a terminal that contains a modular printer unit that includes a first supply of visible ink and a second supply of invisible ink, and an internal program for printing the value indicia with visible ink and an authentication code, which uniquely corresponds to the value indicia, with invisible ink. The invisible value indicia can be subsequently verified as authentic by machine reading of said invisible authentication code and comparing the authentication code for correspondence to the value indicia. (See the Abstract.)

While the instant invention includes a system and method for printing with two inks, the instant invention differs from Wright in that Wright teaches a second ink that is invisible (Col. 12, lines 38-47) which is contrary to the second ink in the instant invention which has a color which is substantially the same as the color of the first ink. Furthermore, because Wright teaches a second ink that is invisible, Wright cannot teach or suggest printing separate

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intermixed patterns with the two inks wherein the first and second patterns are substantially visually indiscernible within the indicium under normal daylight, and the second pattern is discernible from the first pattern when subjected to a fluorescent-exciting illumination source. Because Wright is limited to a second ink that is invisible, no such intermixing of patterns is possible.

At page 3 of the Office Action, five lines from the bottom of the page, the Examiner states:

Although, Wright's printing system/means uses an invisible ink as a second ink different from the first ink. However, Wright's printing system/means certainly/structurally can use "the second different ink having a second color under a normal daylight which is substantially the same as the first color," as set forth in independent claim 11, as an alternative second ink.

The Examiner goes on to cite *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 143 1-32 (Fed. Cir 1997):

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function.

Addressing first the *In re Schreiber* citation, Appellants submit that the elements relied on to distinguish over Wright for the claim 11 rejection are not functional but are structural. The ink supply of the printing system and how the controller controls the printing from the two ink supplies is structural.

The Examiner's statement that Wright's system can use the ink of the instant application as an alternative second ink does not meet the three basic criteria to establish a prima facie case of obviousness. There is no suggestion or motivation, either in Wright or the other references themselves, alone or in combination, or in the knowledge generally available to one of ordinary skill in the art, to modify Wright to replace the second invisible ink with an ink with substantially the same color as the first ink and to print separate intermixed patterns with the two inks wherein the first and second patterns are substantially visually indiscernible within the indicium under normal daylight, and the second pattern is discernible from the first pattern when subjected to a fluorescent-exciting illumination source.

Wright does not provide a motivation for replacing the invisible ink with an ink with substantially the same color as the first ink, because Wright is using the invisible ink for the purpose of postmark authentication as set forth in col. 12, lines 27-47. Wright is not hiding

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information within an image being printed. Furthermore, Wright teaches against printing intermixed patterns with the two inks wherein the first and second patterns are substantially visually indiscernible within the indicium under normal daylight. Wright teaches printing with a second pass overlay method, wherein the invisible ink is printed first and then overprinted with the visible ink. See col. 13, lines 23-31.

Furthermore, Appellants submit that there is no a reasonable expectation of success of Wright teaching or suggesting the instant invention, because, as stated in the instant application, the black fluorescent ink, which is described in the application (paragraphs 2 and 27), provides an ink with fluorescent characteristics while being substantially the same color as the first ink. Such an ink did not exist for Wright as evidenced by U.S. patent application publication Nos. US 2002/0195586 A1, now US Patent No. 6,793,723 and US 2003/0041774 A1, now US Patent No. 6,827,769. Finally, none of the references, alone or in combination teach or suggest all the claim limitations.

In paragraph 4 of the Office Action, the Examiner supports the rejection with the following remarks (emphasis added):

Re claims 11-12, 16-17, 19-20 and 22-23: Wright teaches a system for printing an indicium on an item, the system comprising: a print head system adapted to print at least two different inks onto the item, the print head system comprising a first supply of a first ink having a first color under normal daylight and a second supply of a second different ink, the second different ink having a second color under a normal daylight which is substantially the same as the first color, and wherein the second ink comprises a fluorescent ink (see abstract, lines 7-12); and

a controller ("The printer 40 has a microprocessor unit (printer MPU) 41 which individually and uniquely controls the operation of a print head 42..." col. 8, lines 23-26) for controlling application of the first and second inks by the print head system on the item, wherein the controller is adapted to print the first and second inks in at least partially intermixed patterns such that the patterns of the first and second inks are substantially visually indiscernible within the indicium in normal daylight ("In the invention, an underlying and/or invisible machine readable code is printed first and may then be overprinted with the human readable postmark" col. 12, lines 38-40; col. 12, lines 55-58, which is interpreted as partially intermixed patterns), and the second pattern of the second ink is discernible from the first pattern when subjected to fluorescent-exciting radiation col. 12, line 27 through col. 13, line 50; col. 7, line 40 through col. 9, line 50).

Appellants respectfully disagree with the Examiner's remarks. Wright neither teaches nor suggests the instant invention as described by claim 11. As asserted above, Wright teaches against the present invention because Wright teaches that the second ink is invisible ink, not an

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ink having a second color under a normal daylight which is substantially the same as the first color.

In lines 7-12 of the Abstract to which the Examiner refers, Wright teaches:

The modular printer unit includes a first supply of visible ink and a second supply of invisible ink, and an internal program for printing the value indicia with visible ink and an authentication code, which uniquely corresponds to the value indicia, with invisible ink.

Furthermore, at col. 12, line 27 to col. 13, line 50, upon which the Examiner relies, Wright teaches a postmark authentication that comprises an underlying and/or invisible machine readable code that is printed first and then be overprinted with a human readable postmark. See col. 12, line 38 to col. 13, line 4 (emphasis added):

In the invention, an underlying and/or invisible machine readable code is printed first and may then be overprinted with the human readable postmark. .... Further, the code can be printed with ink that is invisible in the normal light spectrum, so that it is readable only with a magnetic, infrared, or ultraviolet reader.

Referring to an example shown in FIGS. 6a and 6b, a conventional imprinted postmark has a logo or graphic design 70, text 71 indicating that the postage is issued through the U.S. Postal Service, numbers 72 indicating the postage amount, as well as the date 73, and zip code 76 indirectly identifying the city and state of origin, and the identification number 77 of the postage meter from which the postmark was printed. In the invention, coded marks 78 are printed within the visible postmark in a predetermined code field 79 in either visible or invisible, human or machine readable ink. .... Even if the coded marks are printed in visible form, the encryption of a variable postmark element, such as the sender's zip code, date, or postage amount, will make copying difficult.

Further, see col. 13, lines 23-31 (emphasis added):

In the preferred form, the print head 42 is an impact printer which has two ink ribbons 42a and 42b, one of invisible, machine readable ink and the other of visible ink. When the handshake procedure has been completed, and the print command issued by the card MPU 60, the printer MPU 41 accesses the data stored in the memory 43 and, in a first pass, prints the coded marks in invisible ink then, in a second pass, prints the visible postmark information.

The instant invention provides a way to hide information in a printed indicium. According to claim 11, a system for printing an indicium includes a controller is adapted to print the first and second inks in at least partially intermixed patterns such that the patterns of the first and second inks are substantially visually indiscernible within the indicium in normal daylight. By definition, the term indiscernible means incapable of being discerned or not recognizable as distinct. Wright does not teach or suggest such a system. To the contrary,



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the foregoing excerpts of Wright are evidence that Wright teaches against printing at least partially intermixed patterns such that the patterns of the first and second inks are substantially visually indiscernible within the indicium in normal daylight, because Wright teaches either overlay printing and/or printing with invisible ink, or printing distinct marks with the two different inks. Clearly, Wright does not teach or suggest printing intermixed patterns that are substantially visually indiscernible within the indicium in normal daylight.

The Bhatt reference is used by the Examiner only for teaching an invisible ink is a fluorescent ink. Since an invisible ink teaches against the instant invention, the Bhatt reference does not support the rejection.

Concerning the rejection of independent claim 19, the arguments set forth above concerning system claim 11 apply to the rejection of method claim 19 as well. More specifically, the rejection of claim 19 is respectfully traversed because there is no teaching or suggestion to be found in Wright for "printing a second pattern on the item at the first pattern with a second different ink, wherein the second different ink comprises a fluorescent ink having a substantially same color as the first ink under normal daylight, wherein the first and second patterns are substantially visually indiscernible within the indicium under normal daylight, and wherein the second pattern is discernible from the first pattern when subjected to a fluorescent-exciting illumination source". Since Wright teaches that the second ink is an invisible ink, Wright cannot teach or suggest all the elements of claim 19.

As set forth in M.P.E.P. § 2143.03, [i]f an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Claims 12, 14 and 16-18 depend from independent claim 11. Claims 22-23 depend from independent claim 19. For at least the reasons set forth above for independent claims 11 and 19, Appellants respectfully submit that claims 12, 14, 16-17 and 22-23 are allowable along with claims 11 and 19 and on their own merits.

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**B. Claim 13 is patentable over Wright in view of Parkos**

Claim 13 depends from independent claim 11. For at least the reasons set forth above for independent claim 11, Appellants respectfully submit that claim 13 is allowable along with claim 11 and on its own merits.

**C. Claims 15, 18 and 21 are patentable over Wright in view of Soules**

Claims 15 and 18 depend from independent claim 11. Claim 21 depends from independent claim 19. For at least the reasons set forth above for independent claims 11 and 19, Appellants respectfully submit that claims 15, 18 and 21 are allowable along with claims 11 and 19 and on their own merits.

**VIII. Conclusion**

In Conclusion, the Examiner has failed to establish a prima facie case of obviousness because the three basic criteria have not been met: there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; there combined references do not provide a reasonable expectation of success of practicing the instant invention. Finally, the references, alone or in combination do not teach or suggest all the claim limitations. Therefore, Appellants respectfully submit that the final rejections of claims 11-23 are in error for at least the reasons given above and should, therefore, be reversed.

Respectfully submitted,

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Attachments - Appendix A - Claims Appendix (3 pages)

Appendix B - Evidence Appendix (1 page)

Appendix C - Related Proceedings Appendix (1 page)

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**APPENDIX A – Claims Appendix**

11. A system for printing an indicium on an item, the system comprising:
- a print head system adapted to print at least two different inks onto the item, the print head system comprising a first supply of a first ink having a first color under normal daylight and a second supply of a second different ink, the second different ink having a second color under a normal daylight which is substantially the same as the first color, and wherein the second ink comprises a fluorescent ink; and
- a controller for controlling application of the first and second inks by the print head system on the item, wherein the controller is adapted to print the first and second inks in at least partially intermixed patterns such that the patterns of the first and second inks are substantially visually indiscernible within the indicium in normal daylight, and the second pattern of the second ink is discernible from the first pattern when subjected to fluorescent-exciting radiation.
12. A system for printing an indicium on an item as in claim 11 wherein the controller is adapted to print the first and second inks in at least partially intermixed patterns such that the patterns of the first and second inks are substantially visually indiscernible from each other in normal daylight.
13. A system for printing an indicium on an item as in claim 11 wherein the print head system comprises at least two print heads.
14. A system for printing an indicium on an item as in claim 11 wherein the print head system comprises a single print head adapted to pass by an area on the item at least two times, a first one of the times for printing the first ink and a second one of the times for printing the second ink.
15. A system for printing an indicium on an item as in claim 11 wherein the controller is adapted to print the second ink at least partially on top of the first ink.

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16. A system for printing an indicium on an item as in claim 11 wherein the controller is adapted to proportionally print the first and second inks based upon relative sizes of the first and second patterns.
17. A system for printing an indicium on an item as in claim 11 wherein the controller is adapted to print the first and second inks in at least partially interlaced patterns.
18. A system for printing an indicium on an item as in claim 11 wherein the controller is adapted to change the second pattern based upon a signal from an input device.
19. A method of printing an indicium on an item comprising steps of:  
printing a first pattern on the item with a first non-fluorescent ink, the first ink having a first color under normal daylight; and  
printing a second pattern on the item at the first pattern with a second different ink, wherein the second different ink comprises a fluorescent ink having a substantially same color as the first ink under normal daylight, wherein the first and second patterns are substantially visually indiscernible within the indicium under normal daylight, and wherein the second pattern is discernible from the first pattern when subjected to a fluorescent-exciting illumination source.
20. A method as in claim 19 wherein the step of printing the second pattern comprises printing the second pattern relative to the first pattern such that the first and second patterns are substantially visually indiscernible from each other under normal daylight.
21. A method as in claim 19 wherein the step of printing the second pattern comprises printing the second pattern on top of the first pattern.
22. A method as in claim 19 wherein the step of printing the second pattern comprises at least partially interlacing portions of the second pattern with portions of the first pattern.
23. A method for detecting a printed indicium on an item comprising steps of:  
printing the indicium on the item as in claim 19;

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subjecting the indicium to the fluorescent-exciting illumination source; and  
scanning the first and second patterns as the second pattern is made fluorescent to thereby  
read the second pattern.

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**APPENDIX B – EVIDENCE APPENDIX**

There is no evidence submitted pursuant to §§ 1.130, 1.131, or 1.132 or any other evidence entered by the examiner and relied upon by Appellants in the appeal.

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**APPENDIX C – RELATED PROCEEDINGS APPENDIX**

There are no appeals or interferences known to Appellants, their legal representative, or the assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

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